

20001/ 1. An electrical connector comprising:

2 a housing; and,

3 a genderless electrical contact mounted within said housing, said genderless  
4 electrical contact having a longitudinal axis, a proximal end and distal end,  
5 said distal end having a planar electrical contact engaging surface with the  
6 plane thereof intersecting the longitudinal axis at a predetermined angle,  
7 said planar electrical contact engaging surface being positionally maintained  
8 within said housing to permit repeatable electrical engagement with a planar  
9 electrical contact engaging surface of a corresponding genderless electrical  
10 contact.

1 2. The electrical connector of claim 1 wherein the plane of said planar  
2 electrical contact engaging surface intersects the longitudinal axis at an  
3 predetermined angle in the range of 8 to 39 degrees inclusive.

20002/ 3. An electrical connector comprising:

2 a housing; and,

3 a genderless electrical contact mounted within said housing, said genderless  
4 electrical contact having a longitudinal axis, a proximal end and distal end,  
5 said distal end having a planar initial electrical contact engaging surface  
6 portion with the plane thereof intersecting the longitudinal axis at a  
7 predetermined angle and an arcuate final electrical contact engaging surface  
8 portion, said initial and final electrical contact engaging surface portions  
9 being positionally maintained within said housing to permit repeatable  
10 electrical engagement with planar initial and arcuate final electrical contact  
11 engaging surface portions, respectively, of a corresponding genderless  
12 electrical contact.

1 4. The electrical connector of claim 3 wherein the plane of said planar  
2 initial electrical contact engaging surface intersects the longitudinal axis  
3 at an predetermined angle in the range of 8 to 39 degrees inclusive.

7. The electrical connector of claim 3 wherein said housing also is genderless so that the electrical connector can mate with another electrical connector having a corresponding genderless housing and a genderless electrical contact.

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1 8. An electrical connector assembly comprising:

2 a first electrical connector comprising:

3 a housing; and,

4 a genderless electrical contact mounted within said  
5 housing, said genderless electrical contact having a  
6 longitudinal axis, a proximal end and distal end, said  
7 distal end having a planar electrical contact engaging  
8 surface portion with the plane thereof intersecting  
9 the longitudinal axis at a predetermined angle;

10 a second electrical connector comprising:

11 a housing; and,

12 a genderless electrical contact mounted within said  
13 housing, said genderless electrical contact having a  
14 longitudinal axis, a proximal end and distal end, said  
15 distal end having a planar electrical contact engaging  
16 surface portion with the plane thereof intersecting  
17 the longitudinal axis at a predetermined angle;

18 said first and second electrical connector genderless electrical contacts  
19 being electrically engagable with each other with the planes of the planar  
20 electrical contact engaging surface portions intersecting the longitudinal axes  
21 at substantially the same predetermined angle and with the planar electrical  
22 contact engaging surface portions being positionally maintained within their  
23 respective housings so that said planar electrical contact engaging surface  
24 portions are substantially parallel at the moment of their electrical  
25 engagement thereby permitting repeatable electrical engagement with minimal  
26 contact bounce thereof.

1 9. An electrical connector assembly comprising:

2 a first electrical connector comprising:

3 a housing; and,

4 a genderless electrical contact mounted within said  
5 housing, said genderless electrical contact having a  
6 longitudinal axis, a proximal end and distal end, said  
7 distal end having a planar initial electrical contact  
8 engaging surface portion with the plane thereof  
9 intersecting the longitudinal axis at a predetermined  
10 angle and an arcuate final electrical contact engaging  
11 surface portion;

12 a second electrical connector comprising:

13 a housing; and,

14 a genderless electrical contact mounted within said  
15 housing, said genderless electrical contact having a  
16 longitudinal axis, a proximal end and distal end, said  
17 distal end having a planar initial electrical contact  
18 engaging surface portion with the plane thereof  
19 intersecting the longitudinal axis at a predetermined  
20 angle and an arcuate final electrical contact engaging  
21 surface portion;

22 said first and second electrical connector genderless electrical contacts  
23 being electrically engagable with the planes of the planar initial electrical  
24 contact engaging surface portions intersecting the longitudinal axes at  
25 substantially the same predetermined angle and with the planar initial  
26 electrical contact engaging surface portions being positionally maintained  
27 within their respective housings so that said planar initial electrical  
28 contact engaging surface portions are substantially parallel at the moment of  
29 their electrical engagement thereby permitting repeatable electrical  
30 engagement with minimal contact bounce thereof.

10. The electrical connector assembly of claim 9 wherein the magnitude of the predetermined angle of intersection of the planes with the longitudinal axes is established as a function of a predetermined rate of closure of the planar initial electrical contact engaging surface portions during electrical engagement thereof.

11. The electrical connector assembly of claim 10 wherein the magnitude of the predetermined angle of intersection of the planes with the longitudinal axes decreases as the rate of closure of the planar initial electrical contact engaging surface portion increases.

12. The electrical connector assembly of claim 11 wherein the magnitude of the predetermined angle of intersection of the planes with the longitudinal axes is established in accordance with the following table:

<u>Predetermined angle (degrees)</u>	<u>Rate of Closure (meters/sec)</u>
39	.1 to 1
30	.1 to 3
25	.1 to 5
13.5	.1 to 10
8	.1 to 15

Sub 13. An electrical contact assembly of a plurality of genderless electrical  
contacts comprising:

an integrally formed, longitudinally extending genderless electrical  
contact having:

having a longitudinal axis, a proximal end, an intermediate  
portion and distal end, said distal end having a planar electrical  
contact engaging surface portion with the plane thereof  
intersecting the longitudinal axis at a predetermined angle;

and,

web means for connecting at least two of said plurality of  
electrical contacts together in spaced apart relation.

14. The electrical contact assembly of claim 13 wherein said web means  
connects said at least two genderless electrical contacts together at the  
intermediate portions thereof.

15. The electrical contact assembly of claim 13 wherein said web means  
is integrally formed with said at least two genderless electrical connectors.

16. The electrical contact assembly of claim 13 wherein the plane of said  
planar electrical contact engaging surface intersects the longitudinal axis at  
a predetermined angle in the range of 8 to 39 degrees inclusive.

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Sub 17. An electrical contact assembly of a plurality of genderless electrical  
contacts comprising:

an integrally formed, longitudinally extending genderless electrical  
contact having:

a longitudinal axis, a proximal end, an intermediate portion and  
distal end, said distal end having a planar initial electrical  
contact engaging surface portion with the plane thereof  
intersecting the longitudinal axis at a predetermined angle and an  
arcuate final electrical contact engaging surface portion;

and,  
web means for connecting at least two of said plurality of  
electrical contacts together in spaced apart relation.

18. The electrical contact assembly of claim 17 wherein said web means  
connects said at least two genderless electrical contacts together at the  
intermediate portions thereof.

19. The electrical contact assembly of claim 17 wherein said web means  
is integrally formed with said at least two genderless electrical connectors.

20. The electrical contact assembly of claim 17 wherein the plane of said  
planar initial electrical contact engaging surface portion intersects the  
longitudinal axis at a predetermined angle in the range of 8 to 39 degrees  
inclusive.

21. The electrical connector of claim 1 wherein the distal end and the planar  
electrical contacting surface are coterminous.

22. The electrical connector of claim 3 wherein the distal end and the planar  
initial electrical contact engaging surface are coterminous.